



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,198	04/22/2004	Muneo Kudo	252147US0	5547
22850	7590	02/23/2006		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER BROWN, JENNINE M	
			ART UNIT 1755	PAPER NUMBER

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 1/03/2006 was considered by the examiner.

### ***Claim Objections***

Claims 10-18 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only and cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, these claims have not been further treated on the merits.

Claim 5 is objected to because of the following informalities: the tetrafunctional compound should be a titanium compound and not a silane compound represented by formula (2). Appropriate correction is required.

Claims 2-3 and 6 are objected to because of the following informalities: the use of brackets [] rather than parentheses (). In general the use of brackets in a claim denotes the deletion of all text in between the brackets. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

----- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all -----  
obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



Art Unit: 1755

for an extensive review of the case law pertaining to obviousness based on close structural similarity of chemical compounds. See also MPEP § 2144.08, paragraph II.A.4.(c).

Regarding claims 6-9 and 19-20 Konya '152 do not specifically disclose the use of a hydrophilic organic solvent in the presence of a basic material wherein the alcohol is represented by  $R^4OH$  ( $R^4$  is a monovalent hydrocarbon group of 1-6 carbon atoms).

See entire disclosure. Konya '706 discloses titanium chelated compounds in the presence of an organic solvent such as an alcohol group (p.2, pgh 0022-0029). The hydrophilization is disclosed as prepared with a silazane and water to remove excess silazane from the silica-titania compound (p. 4, pgh 0049). The hydrophobilized compound is added to toner within the part per weight of the toner disclosed (p. 5, pgh 0058-0061).

It would have been obvious to one of ordinary skill in the art to modify the original reference to incorporate the organotitanium compound that requires an alcohol solvent so that it is easier to pyrolyze and provide sites for hydrophobically substituting the mixed silica-titania oxide compound, which was what was done by the same inventor of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennine M. Brown whose telephone number is (571) 272-1364. The examiner can normally be reached on M-R 9:30 AM - 7:30 PM; Fridays off.

Art Unit: 1755

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jmb

  
J.A. LORENZO  
SUPERVISORY PATENT EXAMINER